

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “viscoelastic material wound onto or around the shaft” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 13, 14, 16, 21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2003-62758.

'758 teaches a tool holder comprising: a shaft intended to be arranged in a manufacturing machine; a head on which a cutter is intended to be arranged, the head being arranged on the shaft (note: the cutter is where the cutting edge is located, i.e. at the tip); and a viscoelastic material (31) surrounding the surface of the shaft such that the cutter arranged on the head is in isolation via viscoelastic material (31) that is in indirect contact with the machine (figures 1 and 2). '758 also teaches the viscoelastic material (31) surrounds the surface of the shaft. '758 also teaches a metal tube (203) arranged coaxially external to the viscoelastic material (figures 1 and 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15, 17-20, 22, 23, 25 and 26 are rejected under 35 U.S.C. 103(a)

as being unpatentable over JP 2003-62758 in view of Seshimo (USP 4,759,428).

'758 teaches a tool holder comprising: a shaft, a head and a viscoelastic material. Regarding claim 19, it is old and well known in the machining environment to form a cavity (e.g. a drilled out cylinder) in the shaft for purposes such as delivering coolant, reducing the weight, add dampening material ..etc.

However, '758 fails to teach the viscoelastic material being divided into a number of plates threaded onto the shaft and arranged next to each other.

Seshimo teaches a viscoelastic damper (1) consists of a block (4) which is threaded (figure1 and col. 2, lines 62-65). Broadly reading claim 26, the threading of Seshimo is considered to represent winding (viscoelastic material wound onto or around the shaft).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to attach the viscoelastic material of '758's tool to the shaft via threading as taught by Sashimo for the purpose of having better engagement between the two parts.

Response to Arguments

Applicant's arguments filed 1/8/10 have been fully considered but they are not persuasive.

In response to Applicants response that "The objects of Seshimo is to provided a favorable viscoelastic damper making use of dilatant liquid and to provide a

viscoelastic damper which presents very little resistance to low-speed motions and provides an effective damping effect to high-speed vibrational motions. In the present invention, it is important to provide resistance to motions for all frequencies and amplitudes”, Examiner respectfully points out that the argued limitation (i.e. providing resistance to motions for all frequencies and amplitudes) is not claimed. It should also be noted that this limitation is not found in the Specification therefore if Applicant considers to add the language, a new matter rejection will be applied to the claim by the Examiner.

In response to Applicants argument that “It is respectfully submitted that the damping of vibrations from earthquakes, etc. as found in Seshimo has little to do with the tool holder of JP 2003-62758 or even that of the present invention. Seshimo and JP 2003-62758 are from completely different fields of technology. The artisan of ordinary skill would not be looking to Seshimo to solve the problems for providing an effective dampening mechanism in a tool holder such as found in JP 2003-62758. Thus, it is not seen how the claimed invention can be derived from Seshimo being combined with JP 2003-62758”, Examiner respectfully points out Limit cycle oscillations, chatter being a type of limit cycle oscillation, arise in many natural systems such as machine tool, brain electrical signals, return on stock, electrocardiogram, earthquake, vibrations of mechanical structures (such as bridges,, airplane wings, automobile engines and suspensions among others) and communication networks (as evidenced by Madhavan (USP 5,784,273), col. 1, lines 13-22).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sara Addisu/
Examiner, Art Unit 3724
4/24/10

/Boyer D. Ashley/
Supervisory Patent Examiner, Art Unit 3724